

IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claim 1 (Currently Amended): A sensor-equipped antifriction bearing unit comprising an antifriction bearing having an outer ring member and an inner ring member, and a resolver for detecting ~~the rotation of a shaft~~ an air gap between the outer ring member and the inner ring member, one of the outer ring member and the inner ring member being provided with a stator of the resolver, the other ring member being provided at a position opposed to the stator with a face to be detected and formed ~~by machining~~ directly for use as a rotor of the resolver, so that the rotor is integrally formed to the other ring member.

Claim 2 (Currently Amended): A sensor-equipped antifriction bearing unit according to claim 1 wherein the face of the rotor to be detected is in the form of a cylindrical face of the rotor which is eccentric with respect to ~~[[a]] the cylindrical surface centered about an axis of the antifriction bearing~~ which is concentric with a periphery of the other ring member.

Claim 3 (Currently Amended): A sensor-equipped antifriction bearing unit according to claim 1 wherein the face of the rotor to be detected is in the form of a cylindrical face centered about an axis of the antifriction bearing and having a cutout in a form of a flat portion formed in a circumferencial portion thereof.

Claim 4 (Original): A sensor-equipped antifriction bearing unit according to claim 1 wherein the antifriction bearing is a double-row bearing, and the stator is disposed at an intermediate portion between two rows of rolling bodies.

Claim 5 (Original): A sensor-equipped antifriction bearing unit according to claim 1 wherein the resolver is a VR-type resolver.

Claim 6 (Original): A sensor-equipped antifriction bearing unit according to claim 1 wherein the inner ring member is a rotation-side raceway member having a flange for attaching a wheel thereto and to be provided with the wheel, and the outer ring member is a stationary-side raceway member having a portion to be attached to a vehicle body side and mountable on a vehicle body.

Claim 7 (Original): A sensor-equipped antifriction bearing unit according to claim 6 wherein the rotation-side raceway member comprises a shaft composed of a large-diameter portion having a first raceway and a small-diameter portion having an outside diameter smaller than the diameter of the first raceway, and a ring having a second raceway and fitted around the small-diameter portion of the shaft.

Claim 8 (Currently Amended): A sensor-equipped antifriction bearing unit according to claim 7 wherein the stator is disposed at an end portion of the stationary-side raceway member opposed to a shoulder portion of the ring of the rotation-side raceway member, and the face of the rotor to be detected is formed directly on an outer periphery of the shoulder portion of the ring.

Claim 9 (Original): A sensor-equipped antifriction bearing unit according to claim 8 wherein wiring for the stator extends to the outside through an opening in the end portion of the stationary-side raceway member in the form of a hollow cylinder, and a hollow

cylindrical cover having a bottom is provided over the end portion opening of the stationary-side raceway member, the cover having at the bottom thereof a connector member to be provided with a signal transmission harness.

Claim 10 (Original): A sensor-equipped antifriction bearing unit according to claim 9 wherein the stator is fixed to the cover, and the cover is fixed to the stationary-side raceway member.

Claim 11 (Original): A sensor-equipped antifriction bearing unit according to claim 9 wherein a wiring member including a lead wire and a connector pin is fixedly embedded in a resin filling interior thereof.

Claim 12 (New): A sensor-equipped antifriction bearing unit according to claim 1 wherein the stator of the resolver comprises an annular core having a saw-toothed inner periphery, and a stator winding formed by providing coils respectively on all teeth of the core, and wherein the stator is fixed to the outer ring member by a press fit, with the inner ends of the core teeth facing radially inward.